

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
19.05.1999 Bulletin 1999/20

(51) Int Cl.⁶: H04M 11/06

(43) Date of publication A2:
21.06.1995 Bulletin 1995/25

(21) Application number: 94480123.2

(22) Date of filing: 08.11.1994

(84) Designated Contracting States:
DE FR GB

- Dillon, Charles Bruce
Raleigh, NC 27604 (US)
- Marks, Laurence Victor
Raleigh, NC 27612 (US)

(30) Priority: 16.12.1993 US 166996

(71) Applicant: International Business Machines Corporation
Armonk, N.Y. 10504 (US)

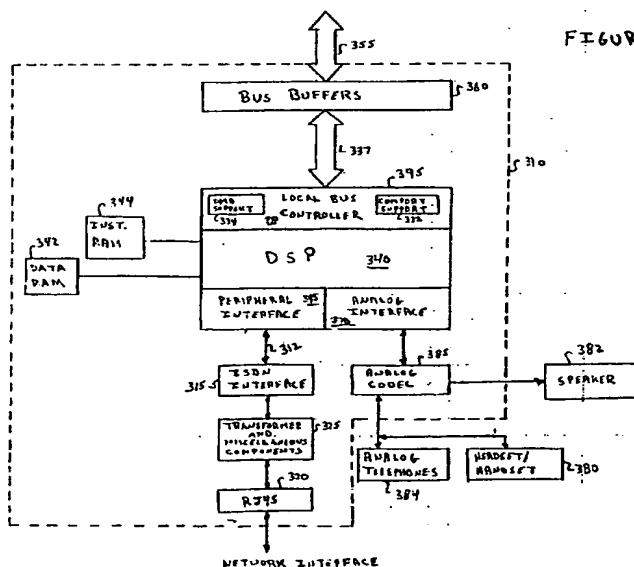
(74) Representative: de Pena, Alain et al
Compagnie IBM France
Département de Propriété Intellectuelle
06610 La Gaude (FR)

(72) Inventors:
• Davis, Gordon Taylor
Raleigh, NC 27615 (US)

(54) **System and method for communicating with digital and analog devices via a single digital interface**

(57) The invention is an ISDN terminal equipment which will maintain connectivity with existing analog modems by setting up a voice-grade connection to existing

analog modems and using the power of a digital signal Processor DSP to generate the digital equivalent of the analog modem signals for transmission on an ISDN "B" channel.



EP 0 659 007 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 94 48 0123

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
D,X	EP 0 353 890 A (IBM) 7 February 1990 * page 2, line 49 - page 3, line 40 * * page 11, line 38 - page 12, line 9 * Claim 1	1	H04M11/06
X	US 5 134 611 A (STEINKA ET AL) 28 July 1992 Abstract * column 3, line 5 - line 34 * * column 4, line 27 - column 5, line 33 *	1	
A	US 4 884 285 A (HEYEN ET AL) 28 November 1989 * column 1, line 46 - line 55 * * column 3, line 22 - line 66 * Claims 1, 8, 15	1	
A	EP 0 499 763 A (IBM) 26 August 1992 * column 1, line 34 - column 3, line 58 *	1	
A	DE 40 42 232 A (INTEC GESELLSCHAFT FUER INFORMATIONSTECHNIK) 2 July 1992 Whole document	1	TECHNICAL FIELDS SEARCHED (Int.Cl.6) H04M H04L H04Q H04J
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18 March 1999	Examiner Blanco Cardona, P
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 (3.12.98) (P4/C31)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 94 48 0123

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-03-1999

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0353890	A	07-02-1990	US 4991169 A	05-02-1991
			DE 68922444 D	08-06-1995
			DE 68922444 T	15-02-1996
			JP 2092427 C	18-09-1996
			JP 2216960 A	29-08-1990
			JP 8008611 B	29-01-1996
US 5134611	A	28-07-1992	NONE	
US 4884285	A	28-11-1989	CA 1260641 A	26-09-1989
			EP 0265272 A	27-04-1988
			JP 63185265 A	30-07-1988
EP 0499763	A	26-08-1992	CA 2060976 A,C	22-08-1992
			DE 69125816 D	28-05-1997
			DE 69125816 T	23-10-1997
			JP 1987106 C	08-11-1995
			JP 6030076 A	04-02-1994
			JP 7007977 B	30-01-1995
			US 5359709 A	25-10-1994
DE 4042232	A	02-07-1992	NONE	

EPO FORM P0489

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82